

WORK PLAN  
for the  
SCREENING SITE INVESTIGATION  
of  
EL RENO ROUNDHOUSE AREA (OKD987073475) &  
UNION PACIFIC RAIL YARD (OKD987082930)  
El Reno, Canadian County, Oklahoma

X SA VOL 1  
SUPERFUND FILE

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REORGANIZED

## I. INTRODUCTION

The U.S. Environmental Protection Agency (EPA) has tasked the Oklahoma State Department of Health (OSDH) to perform a site screening investigation (SSI) at the El Reno Roundhouse Area (ERRA) site, located in Canadian County, Oklahoma. This investigation is performed under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA). The performance of the SSI is authorized under the Multi-site Cooperative Agreement, CA No. V-00645-01.

## A. Objectives

The objectives of the SSI are to characterize and evaluate the potential risks associated with a possible hazardous substance control problem at the site. The SSI builds upon the body of the information developed during the Preliminary Assessment (PA) by verifying and substantiating data collected during the PA, collecting additional data characterizing the site and its environs, and collecting physical environmental samples for analysis to determine the presence and extent of hazardous substances. Through this process, sufficient information is developed to support a management decision as to whether a site qualifies as a candidate for the National Priorities List (NPL) consideration. The overall objective of the SSI, then, is to identify NPL candidates based on the Revised Hazard Ranking System (HRS).

OSDH prefers to combine the Union Pacific Rail Yard (UPRY) site with the above site in this investigation. There is no physical barrier separating the two sites and both were owned and operated by the Chicago, Rock Island, and Pacific Railroad (CRI&P), and subsequently owned, by the Rock Island Line, for many years. Additionally, portions of both sites are currently owned by the Oklahoma Department of Transportation (ODOT), and operated by the Union Pacific Railway Company. Recently, a PA was performed on UPRY. Because of the potential hazards existing on the UPRY site,



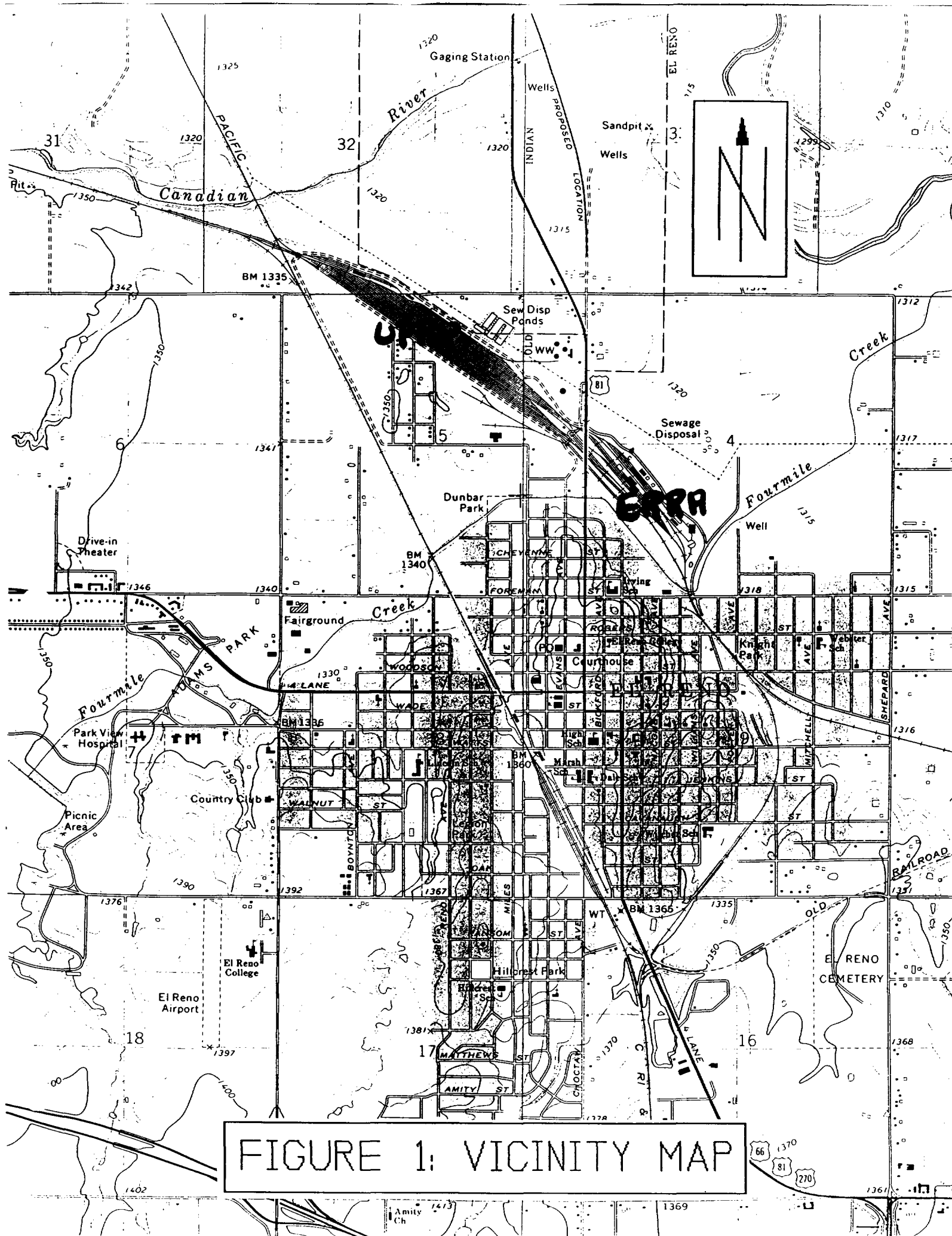
OSDH anticipates that an SSI would be scheduled for this site anyway, and it would be more efficient to address both of the sites in a single SSI report.

### **B. Site Description**

The ERRA/UPRY site is located on US Highway 81 in northern El Reno, Oklahoma, about one mile north of the US Highway 66 and 81 Junction (see Figure 1). The combined site is approximately 145 acres in size and contains about a dozen abandoned buildings and very many abandoned rails. Only one active rail transects through the combined site which is currently operated by Union Pacific Railway.

The eastern portion of the site (ERRA) contains a very large abandoned "diesel shed" which has several sumps, several lagoons or ponds, a large abandoned painting facility, a tar pit, a cement holding basin, and underground storage tanks (UST). The western portion of the site (UPRY) includes a large temporarily-inactive metal blasting and painting facility, many small to moderate sized abandoned buildings, an 6.5 acre wastewater lagoon system, a reported buried oil-sludge impoundment, sumps, and USTs (see Figure 2).

Generally, an equal proportion of industrial, agricultural, and residential properties are either adjacent or surrounding the combined site. A significant number of workers, from onsite and neighboring industries, use the roads that surround and transect the combined site. Some residences within one-quarter mile rely on private wells, and all of the City of El Reno municipal supply wells, a dedicated system, are located within one-mile northeast and are possibly downgradient from the site. Additionally, most of the City of El Reno, population 15,000, falls within a four mile radius of the site. There is a significant amount of wetland acreage associated with Fourmile Creek, a small stream, and the North Canadian River, a moderate stream. Both streams are very near by and receive surface waters from the combined site. These two streams are also considered as primary fisheries.



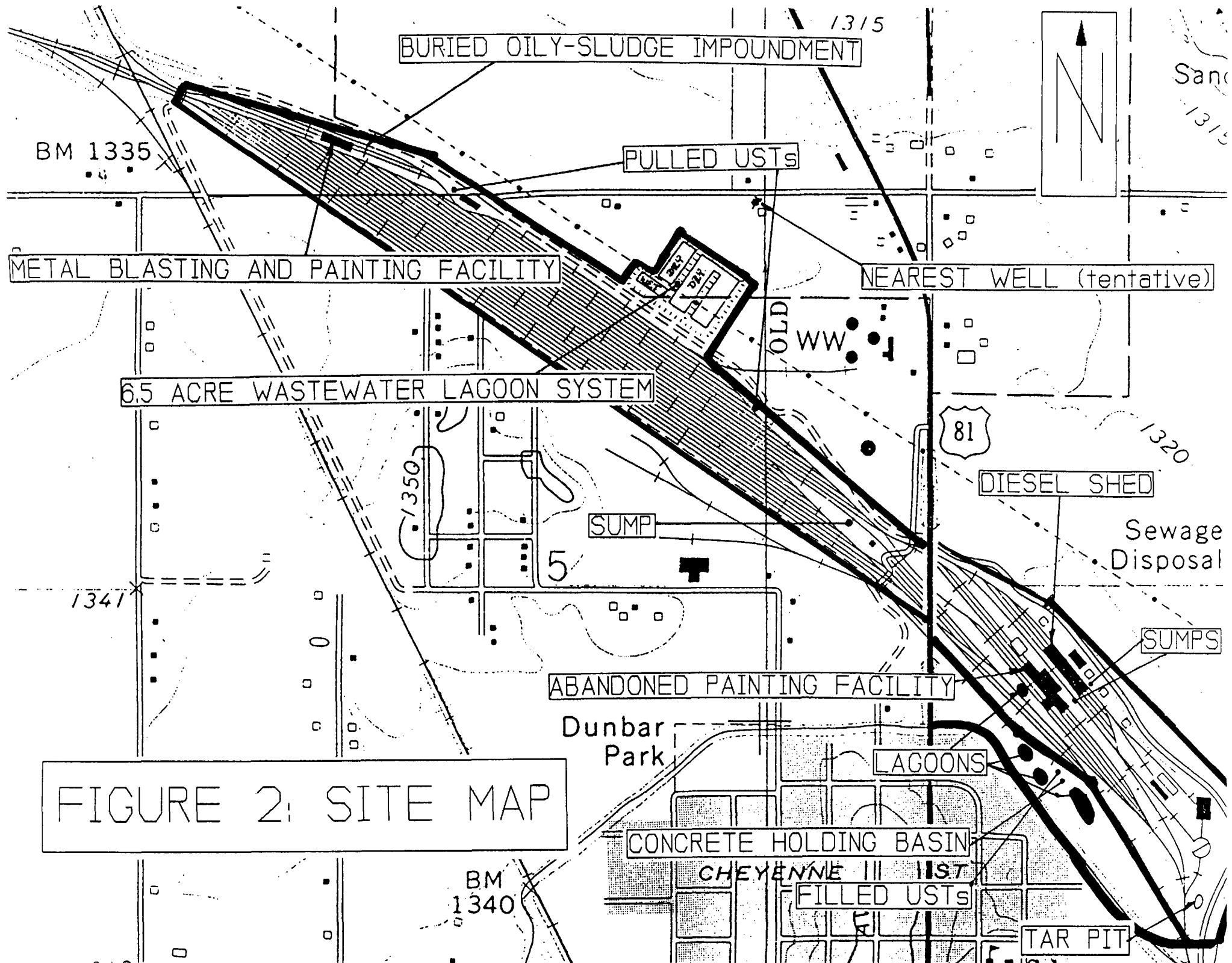


FIGURE 2: SITE MAP

## II. NON-SAMPLING DATA

Preliminary Assessments of ERRA and UPRY sites were conducted by OSDH in July 27, 1990, and May 22, 1991, respectively. Both PAS consisted of a search of ODOT map files, background data collection, offsite reconnaissance, and targets identification. Both PA reports are included in the appendix section of the Work Plan. On June 3, 1991, an onsite reconnaissance was conducted for the purpose of better identifying potential waste sources and formulating a sampling plan. The site visit report is also included in the appendix section of this Work Plan. The following sections briefly characterize sources and migration pathways, and identifying those background and site environs data elements that remain to be collected and/or verified during the SSI. These non-sampling data requirements are summarized in Table 1.

### **A. Source/Waste Characterization**

For the UPRY (western) portion of the combined site, the potential onsite sources are listed below.

<u>SOURCE TYPE</u>	<u>WASTE TYPE</u>
10 ft <sup>2</sup> spent metal blasting pile	Contains heavy metals
1000 ft <sup>2</sup> contaminated soils	"
20 - 30 drums	Solid waste including spent metal blasting material and paint sludges containing methyl ethyl ketone (MEK) and xylene.
Two (2) dumpsters	"
Buried oily-sludge impoundment	Unknown
6.5 acre wastewater lagoon system	"
Several sumps	Possibly containing diesel and sludges
Several USTs	Probably empty or containing diesel

The pile, contaminated soils, and the drums are associated with the onsite painting facility which has been temporarily inactive since the end of April, 1991, and is expected to be in full operation again in the very near future. The facility was most recently operated by R. T. Nelson Painting Services, Inc., and is

a government contractor which resurfaces aluminum airfield matting for the U.S. Armed Forces. The operation has been present for three years and uses a steel grit to blast the paint residue and surface coatings from the old mattings which are subsequently repainted. According to an historical aerial photograph the building has been present at least since 1972. In the most recent operation, the painting facility had used xylene and MEK as solvents to clean the paint spraying equipment. The solid wastes were routinely disposed of in the county municipal landfill.

It is unknown if the buried oily-sludge impoundment which was reported to be adjacent to the painting facility, was actually generated by the painting facility. It is also unknown if the wastewater lagoon system had ever received spent solvents from the painting facility, however, until about 10 - 15 years ago, the lagoons did receive waste from sumps located in the freight car cleaning area and possibly from the sumps located in the diesel engine fueling areas of this site. It is reported that the 6.5 acre wastewater lagoon is also owned by R. T. Nelson Painting Services, Inc. The lagoon ownership will be confirmed during the SSI.

For the ERRA (eastern) portion of the combined site, the potential onsite sources are listed below.

<u>AMOUNT AND SOURCE TYPE</u>	<u>WASTE TYPE</u>
21,600 - 27,000 ft <sup>3</sup> contaminated soils	Contains heavy metals
Several sumps	Possibly contain spent motor oil and diesel
10,800 ft <sup>3</sup> tar pit	Contains organics
Four (4) wastewater lagoons	Possibly contain spent solvents
Single concrete basin	Possibly contain spent motor oil
Many USTs	Three possibly contain spent motor oil, all others are probably either empty or contain diesel.

The above contaminated soils are blue-green in appearance and surround the abandoned painting facility. The generator of the organic wastes in the tar pit is unknown. The sumps, the concrete

basin, and the three USTs, appear to contain spent motor oil and are currently used for a "recycling" or temporary storage operation. The generator and operator involved in this spent oil operation is unknown.

#### **B. Groundwater**

The aquifer of concern is the Terrace Deposit of the North Canadian River and the water table may be encountered as shallow as 5 feet. The potential ground water targets are of most significant concern because of the nature of the subsurface hydrology and its transmissivity, the probable contaminants at the combined site, and the number of wells identified in the study area including a significant number of City of El Reno municipal wells. Two wells, at least one private, will be sampled during the SSI. These wells will be identified and located before the sampling event. Additionally, information regarding the water quality of the City wells will be retrieved from the State Environmental Laboratory during the SSI.

#### **C. Surface Water**

No drinking surface water intakes have been identified, however, there are wetlands and fisheries that could be impacted by surface water runoff from the site. Therefore, it is deemed necessary to sample most of the surface water impoundments and contaminated soils found onsite.

#### **D. Air and Soil Exposure**

Since the site is often visited by workers from onsite and neighboring industries, and occasionally visited by other citizens, both of these pathways are of significant concern. Some surface soil samples will be collected from dried lagoons and near the temporarily inactive and abandoned painting facilities.

Table 1

NON-SAMPLING DATA COLLECTION REQUIREMENTS

<u>Data Requirement</u>	<u>Collection Methodology</u>
Identify and locate nearby private wells.	Inquire to the Canadian County Sanitarions to locate a upgradient and downgradient private well in the same shallow aquifer that is preferably within 0 - 1/4 mile from the site.
Quality of water from the City of El Reno public water wells.	Obtain information from SEL regarding drinking water criteria testing results, i.e. before facility treatment.
Confirm the owner of the 6.5 acre lagoon system.	Visit county clerk and interview R.T. Nelson Painting, Inc., Manager.



### III. ANALYTICAL DATA

In addition to the collection and verification of non-analytical data discussed above, a number of environmental samples will be collected for laboratory analysis to further document the contaminants onsite and possibly the extent that these contaminants may have migrated offsite. In all, up to 25 samples will be collected. As described below, there are many types of the sources of concern to be sampled. The protection of field personnel during onsite activities is discussed under the Health and Safety Plan in the appendix section of this Work Plan.

#### A. Existing Analytical Data

On May 1990, OSDH conducted a "RCRA" compliance evaluation inspection of the R.T. Nelson Painting Service, Inc., i.e. the metal blasting and painting facility in the UPRY portion of the combined site. At the time of the inspection, samples of their waste was collected and analyzed. Results of the analysis were included in the UPRY PA. As stated in the PA, it was generally found that the facility was a conditionally exempt small quantity generator of hazardous waste and that the spent metal blasting material did not exceed the EP Toxicity limits. In the SSI, the spent metal blasting pile will be resampled and for the first time will be tested for the Toxicity Characteristic Leaching Procedure (TCLP). Regarding the UPRY site, the 6.5 acre wastewater lagoon system, the buried oily-sludge impoundment, a sump, and areas of pulled USTs will be sampled in the SSI for the first time.

On February 1990, OSDH conducted sampling at the eastern (ERRA) portion of the combined site to determine if there were any hazardous substances onsite. The results and interpretation of the sample analysis were included in the ERRA PA. Below, only the relevant sources of concern and results are briefly described. Since the contaminated soils, associated with the abandoned painting facility, and the tar pit were sampled and tested in this sampling event, these sources will not be resampled. For the ERRA portion of the combined site, only the onsite lagoons, a sump, a filled UST, and a concrete basin will be sampled and analyzed in this SSI for the first time.

## B. SSI Sampling Strategy

All sampling collection, preservation, QA/QC ( including the preparation of field blanks and triplicates) and chain of custody procedures used during this investigation will be in accordance with the standard operating procedures specified in the Quality Assurance Project Plan (QAPP) for the MCSA PA/SSI Program submitted by OSDH to the U.S.E.P.A. - Region VI, December 1990.

All samples to be collected during the SSI are identified and discussed in the following sections in Table 2. The location of onsite sampling points is generally depicted in Figure 2.

**1. Source/Waste Characterization.** The source of upmost concern are the waste water impoundments. There are several lagoons located within the combined site. On the western (UPRY) portion of the combined site is the 6.5 acre wastewater system which is actually composed of three lagoons. Only one of these three lagoons is wet, and an aqueous and sediment sample will be collected from this lagoon. Three surface and three subsurface samples will be collected from the lowest elevations of the dry lagoons.

The eastern (ERRA) portion of the site has four smaller lagoons. In the present time, they are all wet. Two out of the four lagoons will be sampled. Tentatively, a sediment and water sample will be collected from these two lagoons. If possibly one of the lagoons are dry at the time of sampling, then a surface and subsurface sample will be collected in place of a wet sample. All lagoon samples from the combined site (12 total samples) will be tested for volatile and semi-volatile organics, and total metals. All wet lagoon samples will also be tested for pH.

Additionally, other sources of concern to be sampled in the SSI are described in the following: for the UPRY portion of the site; the spent metal blasting pile will be resampled for the Toxicity Characteristic Leaching Procedure (TCLP) analysis, the contaminated soils associated with the pile will be collected for total metals analysis, a subsurface sample of the reported buried oily-sludge impoundment will be collected and tested for total metals and organics, two surface soil samples will be collected from the areas of excavation of two pulled USTs and will be analyzed for metals and organics, and a sump possibly containing spent oil will be sampled and tested for metals, organics, and scanned for hydrocarbons.

For the ERRA portion of the site, a water and sediment sample will be collected from the concrete basin and tested for metals and organics; a sample will be collected from one of the three USTs and from one of the sumps which appear to contain spent motor oil, and both will be tested for metals and organics, and scanned for hydrocarbons.

2. **Groundwater.** One sample will be collected from the nearest residence with a well, i.e. a 1/4 mile north of the 6.5 acre wastewater lagoon system. A upgradient well, screened at the same interval, will also be sampled as background.

3. **Surface Water.** Wetlands and fisheries could be impacted by this pathway. If contamination is via this pathway, then the sampling of the wastewater lagoons and contaminated soils should contribute in determining the potential sources.

4. **Air and Soil Exposure.** The analysis of contaminated soils and onsite Hnu monitoring during all field activities should contribute in determining potential contamination via these two pathways. A background surface sample will also be collected offsite.

**Table 2: SAMPLING SUMMARY**

<u>Sample Type</u>	<u>Analysis</u>	<u>Sample #</u>	<u>Description and Location</u>	<u>Rationale</u>
Waste material	Metals (TCLP)	UP-WM-1	Spent metal blasting pile (UPRY)	Waste Characterization
	GC/MS, metals	UP-WM-2	Buried sludge impoundment (UPRY)	"
	GC/MS, metals, hydrocarbon scan	UP-WM-3	Sump with oil (UPRY)	"
	"	ER-WM-1	UST with oil (ERRA)	"
	"	ER-WM-2	Sump with oil (ERRA)	"
Groundwater	GC/MS, metals, pH, Cl	GW-1	Nearby private well	Shallow and downgradient well.
	"	GW-BG	Upgradient well	Background
Aqueous	GC/MS, metals, pH	UP-SW-1	Wet lagoon (UPRY)	Waste Characterization
	"	ER-SW-1	Wet lagoons (ERRA)	"
		ER-SW-2		
	GC/MS, metals, pH, hydrocarbon scan	ER-SW-3	Concrete basin (ERRA)	"
Sediments	GC/MS, metals	UP-SD-1	Wet lagoon (UPRY)	Waste Characterization
	"	ER-SD-1	Wet lagoons (ERRA)	"
		ER-SD-2		
	GC/MS, metals, hydrocarbon scan	ER-SD-3	Concrete basin (ERRA)	"
Surface soil	GC/MS, metals	UP-SS-1	Dry lagoons (UPRY)	Waste Characterization
		UP-SS-2		
		UP-SS-3		
	Metals	UP-SS-4	Contaminated soils around pile (UPRY)	"
	GC/MS, metals, hydrocarbon scan	UP-SS-5	Areas of two pulled USTs (UPRY)	
		UP-SS-6		
	GC/MS, metals	SS-BG	Area away from site	Background
Subsurface soil	GC/MS, metals	UP-SB-1	Dry lagoons (UPRY)	"
		UP-SB-2		
		UP-SB-3		

#### IV. PROJECT MANAGEMENT

##### A. Key Personnel

The Project Manager for this investigation is Richard Brooks. The Project Manager's responsibilities include assuring that the site access authority is obtained, directing and overseeing all onsite and offsite activities associated with the investigation, documenting and managing all samples collected.

The Site Safety Officer is Scott Thompson. Kelly Dixon and Hal Cantwell will be assigned to assist in the sampling event. The EPA Region VI Project Officer for this investigation is Barbara Driscoll.

##### B. Schedule

Initial background and site environs data will be pursued from the office, to the extent possible, in advance of mobilization. Mobilization, arrival and site access has been tentatively arranged for July 9, 1991. It is anticipated that all environmental sampling and onsite/offsite data collection activities can be completed in one day, however, onsite access for the following day has been arranged as a contingency. Additional background data will be pursued, as necessary, from the office.

OKLAHOMA STATE DEPARTMENT OF HEALTH  
SOLID WASTE MANAGEMENT SERVICE  
HEALTH & SAFETY PLAN

**A. GENERAL INFORMATION**

SITE: El Reno Roundhouse Area and Union Pacific Rail Yard

HAZSIT NO: Unknown

EPA ID NO: OKD987073475 and OKD987082930, resp.

LOCATION: North of El Reno, OK

PLAN PREPARED BY: Richard L. Brooks, Sr. Environmental Specialist

DATE: 6-18-91

OBJECTIVE: Protection of field personnel during onsite activities

PROPOSED DATE OF INVESTIGATION: July 2, 1991

BACKGROUND REVIEW: Preliminary

OVERALL HAZARD: Low

**B. SITE/WASTE CHARACTERISTICS**

WASTE TYPES(S): Liquid, solid, sludge and vapors.

CHARACTERISTIC(S): Volatile and possibly toxic.

FACILITY DESCRIPTION: An essentially abandoned rail yard and roundhouse area with wastewater lagoons, a tar pit, contaminated soils, sumps and USTs. Site includes a temporarily inactive metal resurfacing and painting facility.

PRINCIPAL DISPOSAL METHOD (type and location): Wastewater and spent-solvent impoundments.

UNUSUAL FEATURES (dike integrity, power lines, terrain, etc.): There are many abandoned railroad tracks.

STATUS: Relatively inactive

HISTORY (Worker or non-worker injury; complaints from public; previous agency action): There had been an RCRA inspection of metal blasting and painting facility.

### C. HAZARD EVALUATION

The primary hazards involved with field activities are not associated with onsite wastes and these are described below;

HEAT: All participants will be monitored for heat stress. Work periods will be timed and breaks will focus on fluid replenishment. Care will be taken not to wear more protective clothing than warranted.

PHYSICAL HAZARDS: Participants will be brief on physical hazards known to exist and will work in teams.

### D. SITE SAFETY WORK PLAN

SITE PERIMETER ESTABLISHED/IDENTIFIED: Yes, see Figure 1 of this Work Plan.

SITE SECURED: No

ZONES OF CONTAMINATION IDENTIFIED: Tentatively

LEVEL OF PROTECTION: Level C and D.

SURVEILLANCE EQUIPMENT AND MATERIALS: Thermometer, HNu

DECONTAMINATION PROCEDURES: Contaminated clothing will be disposed of properly. Tools will either be decontaminated by washing and rinsing with the appropriate reagents or disposed of with clothing.

SITE ENTRY PROCEDURES: Notification of site owner(s) and local officials will be arranged.

#### TEAM MEMBER AND RESPONSIBILITY:

Richard Brooks, Project Manager  
Scott Thompson, Site Safety Officer  
Kelly Dixon, Technical Assistance  
Hal Cantwell, Technical Assistance

WORK LIMITATIONS (Time of day, etc): Subject to the constraints of the heat index which is a function of ambient relative humidity and temperature which will be monitored.

INVESTIGATION-DERIVED MATERIAL DISPOSAL: Will be managed in accordance with USEPA draft guidance. It is not expected that appreciable amounts of liquid industrial waste will be generated. Any solid industrial waste will be tagged and landfilled as non-hazardous or as a small quantity hazardous waste.

## **E. EMERGENCY INFORMATION**

### **LOCAL RESOURCES:**

Ambulance	911
Hospital Emergency Room	Parkview Hosp. (405) 262-2640
OK Poison Control Center	(405) 271-5454
Police	911
Fire Department	911
County Sheriff	911

### **STATE RESOURCES:**

Explosives Unit - OK Highway Patrol, Dutch Snyder	(405) 424-4011
- OK Fire Marshall, Jim Smith	(405) 424-4371
Oklahoma Highway Patrol, Accidents & Disasters	(405) 682-4343
OSDH Radiation & Special Hazards SVC	(405) 271-5221
OSDH Solid Waste Management Services	(405) 271-7169

### **SITE RESOURCES:**

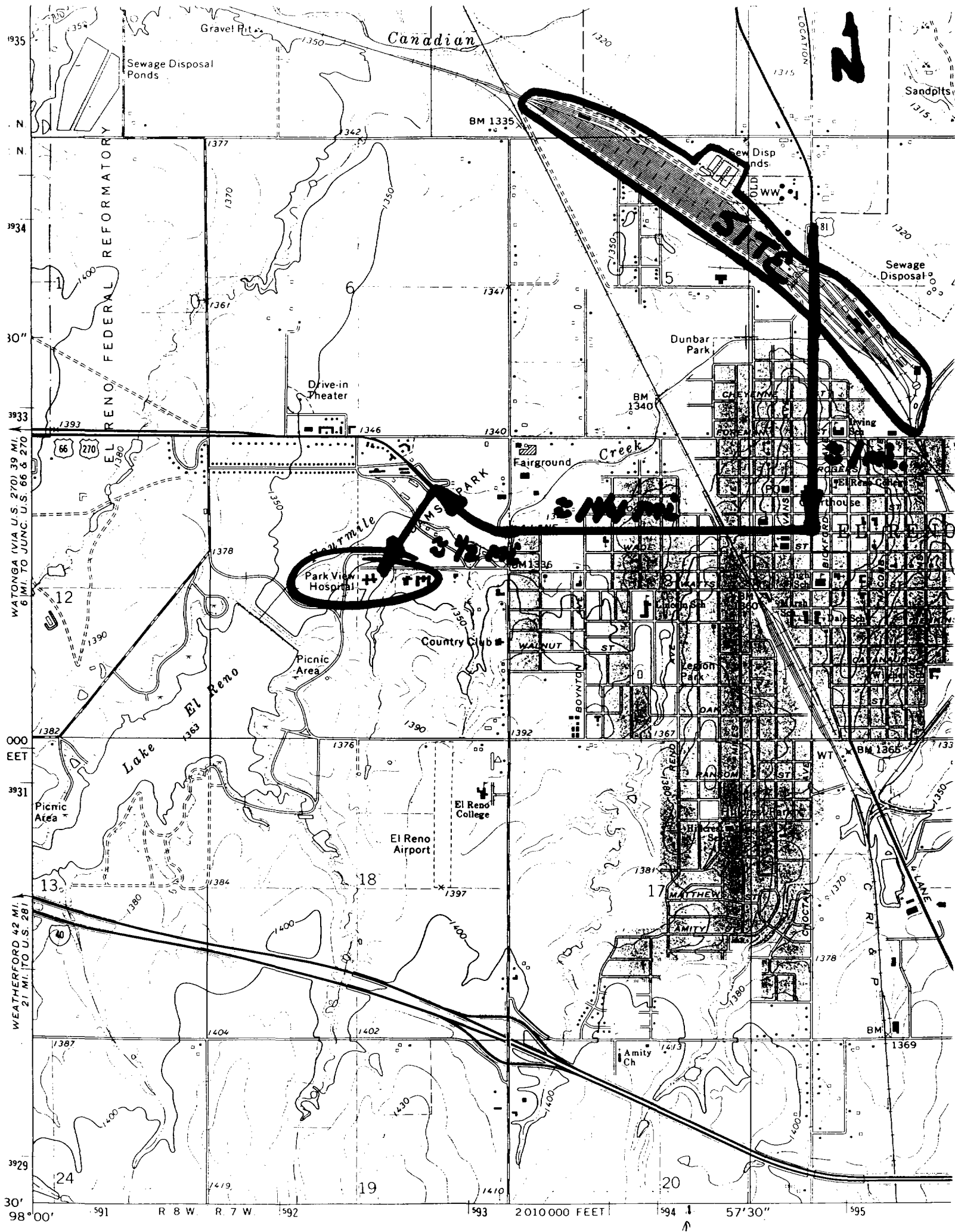
Water Supply	City of El Reno
Telephone	Pipeyard, adjacent to site
Other	Buried cable 1-800-522-6543

## **F. EMERGENCY ROUTES**

**HOSPITAL:** Parkview Hospital 2115 Parkview Dr., El Reno, OK

The directions are: 1 mile south from the site on US HW 81, 1 1/4 mile west on US HW 66, and 1/2 mile southeast on Parkview Dr. to the hospital. The trip should not take more than 10 minutes (see attachment).





## V. APPENDIX

- A. Health and Safety Plan
- B. El Reno Roundhouse Area Preliminary Assessment
- C. Union Pacific Rail Yard Preliminary Assessment
- D. Onsite Reconnaissance Memorandum